

We claim:

1 1. A dust tolerant scanner, comprising:
2 a housing including optics which define an optical
3 path between an object focal plane and a sensor focal
4 plane;

5 a document feeder mechanically coupled to the
6 housing, the document feeder including a reference surface
7 positioned adjacent the object focal plane, the document
8 feeder providing a media path through the object focal
9 plane, the document feeder being configured to advance
10 media along the media path; and

11 a media conformance member mechanically coupled to
12 the housing and positioned adjacent the reference surface,
13 the media conformance member including an aperture through
14 which the optical path extends, the media conformance
15 member being formed such that media advanced by the
16 document feeder along the media path is biased toward the
17 reference surface.

1 2. A dust tolerant scanner as claimed in claim 1,
2 wherein the optics include a mirror positioned at an
3 opposite side of the housing from the object focal plane.

1 3. A dust tolerant scanner as claimed in claim 2,
2 wherein the mirror is a dust or debris collecting surface.

1 4. A dust tolerant scanner as claimed in claim 1,
2 wherein the document feeder is an automatic document
3 feeder.

1 5. A dust tolerant scanner as claimed in claim 1,
2 wherein the media conformance member includes a ramp
3 portion adjacent the aperture.

1 6. A media scan assembly for a dust tolerant
2 scanner, the media scan assembly comprising:

3 an upper document feeder portion and a lower document
4 feeder portion providing a media path, the upper document
5 feeder portion including a reference surface adjacent the
6 media path, the lower document feeder portion including an
7 aperture facing the reference surface, the lower document
8 feeder portion being configured to be attached to a main
9 housing of the scanner; and

10 at least one drive roller configured to advance media
11 along the media path.

1 7. A media scan assembly as claimed in claim 6,
2 wherein the upper document feeder portion includes a
3 spring which mechanically couples the reference surface to
4 the upper document feeder portion.

1 8. A media scan assembly as claimed in claim 6,
2 wherein the upper document feeder portion includes a
3 raised portion adjacent the reference surface.

1 9. A media scan assembly as claimed in claim 8,
2 wherein raised portion is positioned after the reference
3 surface along the media path.

1 10. A media scan assembly as claimed in claim 6,
2 wherein the reference surface is white.

1 11. A media scan assembly as claimed in claim 6,
2 wherein the lower document feeder portion includes a media
3 conformance member which biases media advanced along the
4 media path toward the reference surface.

1 12. A media scan assembly as claimed in claim 11
2 wherein the media conformance member includes at least one
3 ramp portion.

1 13. A media scan assembly as claimed in claim 6,
2 wherein the at least one drive roller is mechanically
3 coupled to the lower document feeder portion.

1 14. A media scan assembly for a dust tolerant
2 scanner, the media scan assembly comprising:

3 an upper document feeder portion and a lower document
4 feeder portion defining a media path, the lower document
5 feeder portion including a media conformance member shaped
6 to push a piece of media against the upper document feeder
7 portion, the media conformance member including an
8 aperture shaped to provide an optical path to the media
9 path; and

10 a media driver configured to reposition media along
11 the media path.

1 15. A media scan assembly as claimed in claim 14,
2 wherein the upper document feeder portion includes a
3 reference surface which faces the aperture.

1 16. A media scan assembly as claimed in claim 15,
2 wherein the reference surface is substantially uniform in
3 color.

1 17. A media scan assembly as claimed in claim 15,
2 wherein the media conformance member includes a top
3 portion facing the reference surface and a ramp portion
4 adjacent the top portion.

1 18. A media scan assembly for a dust tolerant
2 scanner, the media scan assembly comprising:

3 an upper document feeder portion and a lower document
4 feeder portion defining a media path, the upper document
5 feeder portion and the lower document feeder portion being
6 configured to advance media along the media path, the
7 upper document feeder portion including a reference
8 surface, the lower document feeder portion including an
9 aperture facing the reference surface, the media path
10 being configured to push a piece of media in the media
11 path against the reference surface, the aperture providing
12 an optical path to the media path.

1 19. A media scan assembly as claimed in claim 18,
2 wherein the lower document feeder portion includes an
3 angled surface which is positioned before the reference
4 surface along the media path.

1 20. A media scan assembly as claimed in claim 18,
2 wherein the upper portion includes a raised surface which
3 is positioned after the reference surface along the media
4 path.